Instructions-Parts

Volumetric Fluid Flow Meter

308778P
ENG

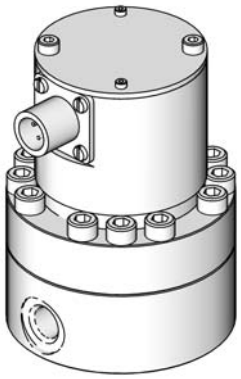
For precise metering of plural component fluids or solvents (depending on model). For professional use only.

See page 2 for model information, including maximum working pressure.

Important Safety Instructions

Read all warnings and instructions in this manual. Save these instructions.

G3000 and G3000HR (Model 289813 with 90° Sensor Connector Shown)



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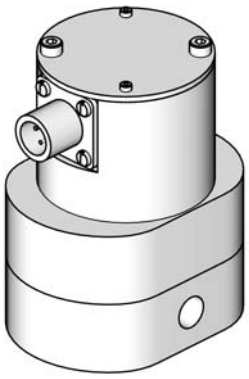
S3000 Solvent Meter



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Recognized Component

9902471
Conforms to UL2279
Certified to
CAN/CSA E79-0
CAN/CSA E79-11

II 1 G

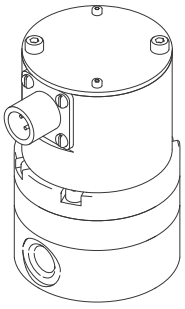
EExia II A T3
ITS03ATEX21212X

*** 0359**

Intrinsically Safe for Hazardous Locations (Class I; Division 1; Group D) when used with an approved barrier only.

* *CE mark approvals only apply to meters used as part of Graco ProMix, ProMix 2KS, and PrecisionMix II Systems.*

G250 and G250HR



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Models

Low Pressure Fluid Meters

300 psi (2.1 MPa, 21 bar) Maximum Fluid Working Pressure

Meter Part No.	Series	Model	Flow Range
249426	A	G250	0.02 to 1.0 gpm (75 to 3800 cc/min)
249427	A	G250HR	0.01 to 0.5 gpm (38 to 1900 cc/min)

High Pressure Fluid Meters

4000 psi (28 MPa, 280 bar) Maximum Fluid Working Pressure

Meter Part No.	Series	Model	Flow Range
239716	A	G3000	0.02 to 1.0 gpm (75 to 3800 cc/min)
244292	A	G3000HR	0.01 to 0.5 gpm (38 to 1900 cc/min)
289813	A	G3000, with 90° sensor connector	0.02 to 1.0 gpm (75 to 3800 cc/min)
289814	A	G3000HR, with 90° sensor connector	0.01 to 0.5 gpm (38 to 1900 cc/min)

High Pressure Solvent Meters

3000 psi (21 MPa, 210 bar) Maximum Fluid Working Pressure

Meter Part No.	Series	Model	Flow Range
258718	A	S3000, with 90° sensor connector	0.01 to 0.5 gpm (38 to 1900 cc/min)

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

⚠ WARNING

SKIN INJECTION HAZARD

High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.**

- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Do not spray without tip guard and trigger guard installed.
- Engage trigger lock when not spraying.
- Follow **Pressure Relief Procedure** in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Ground all equipment in the work area. See **Grounding** instructions.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail.
- If there is static sparking or you feel a shock, **stop operation immediately.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.

SPECIAL CONDITIONS

Equipment must comply with the following conditions to avoid a hazardous condition which can cause fire, explosion, or electric shock:

- Never use the flow meter with an electrostatic gun isolation stand.
- Keep liquids away from the electronic sensor device.
- Do not service the electronic sensor. Return it to your Graco distributor for service.
- Sensor housing is of aluminum construction. Precautions must be taken to avoid impacts or contact with moving parts.

PRESSURIZED EQUIPMENT HAZARD

Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.

- Follow **Pressure Relief Procedure** in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.

⚠ WARNING

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS forms from distributor or retailer.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDS's to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
- Always wear impervious gloves when spraying or cleaning equipment.

PERSONAL PROTECTIVE EQUIPMENT

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:

- Protective eyewear
- Clothing and respirator as recommended by the fluid and solvent manufacturer
- Gloves
- Hearing protection

Installation

- All electrical equipment must only be installed by a qualified electrician.
- Understand and follow your local code and safety regulations for hazardous location wiring of intrinsically safe circuits.

Dust and Foreign Matter

Avoid having dust or foreign matter enter the flow meter by taking the following precautions:

- Thoroughly flush the fluid supply lines before installing the flow meter.
- When installing fittings, make sure that no sealing tape overlaps into the inside of the pipe.
- Install a 100 mesh fluid filter upstream of the flow meter.

Installing the Flow Meter

NOTE: You must assemble the meter sensor to the meter body before connecting the cable to the sensor for the meter to function properly.

- Flow volume can only be measured at the location where the flow meter is installed.
- The Fluid Flow Meters are intrinsically safe for Class I; Division 1; Group D hazardous indoor (NEMA 1) locations when installed with an intrinsically safe power device and wiring.

  Refer to ANSI standards ISA-RP12.6, NEC Article 504 and the Canadian Electrical Code Appendix F.
- Do not use more than 200 ft. (61 m) of cable.
- Refer to FIG. 1 to locate and install the flow meter, connectors, and fluid shutoff valves. Install a check valve to prevent backflow. The arrows on the flow meter and check valve show the direction of fluid flow.
- The shutoff valves allow you to isolate the meter for service.
- Refer to the **Technical Data** and **Dimensions** Drawings for dimension, inlet/outlet size, temperature and other specifications.

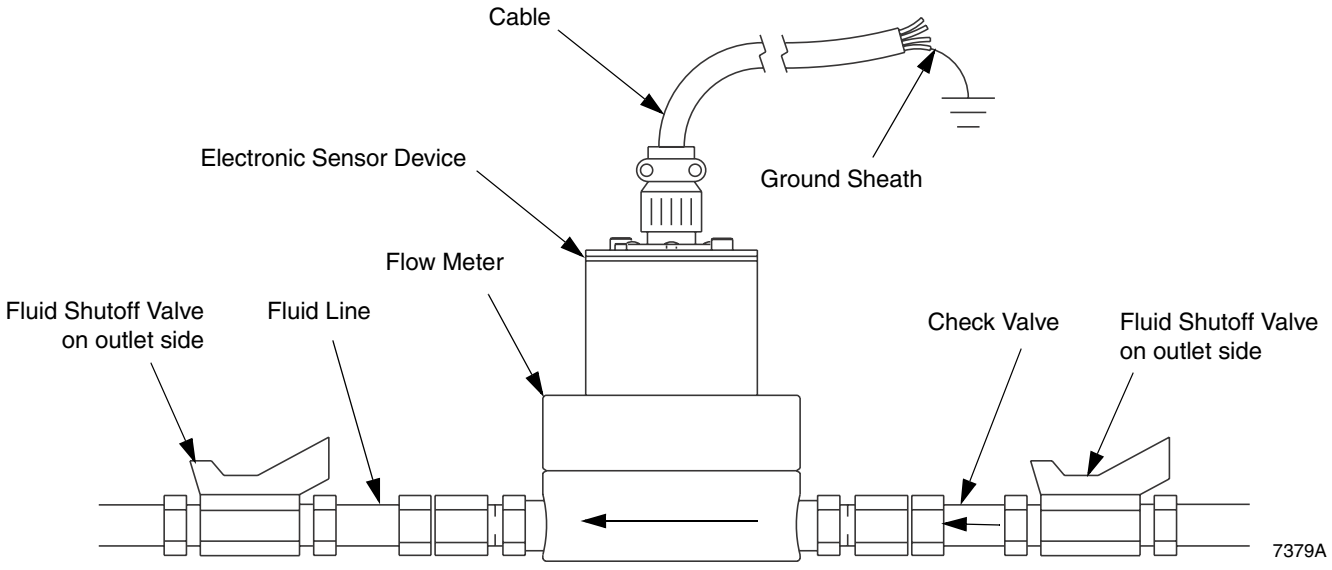
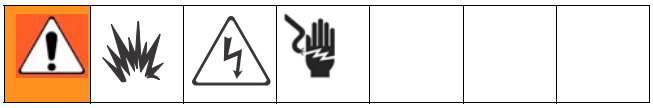


FIG. 1: Typical Installation

Grounding



1. Ground the flow meter by connecting a grounded cable to the sensor.

   Have a qualified electrician check the electrical grounding continuity between the flow meter sensor and a true earth ground; remove the cable connector from the sensor and measure the resistance from the cable connector Pin B to true earth ground. Refer to FIG. 2.

   If the resistance is greater than 25 ohms, check the cable ground connection. Refer to FIG. 2. Reconnect the ground sheath or replace the cable. Do not operate the system until the problem is corrected.

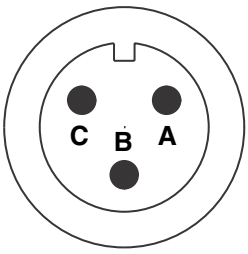
2. Always ground the fluid supply unit, using one of the following options:

   a. Mount the meter to a grounded conductive surface, or

   b. Connect the conductive fluid hose to the meter inlet and outlet, or

   c. Connect a ground wire to the meter's M6 mounting holes.

3. Never use the flow meter with an electrostatic gun isolation stand.



A +10-30 Vdc Supply (red)
B Ground (black)
C Signal Out (white)

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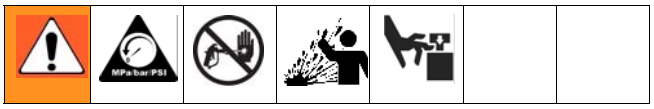
FIG. 2

Operation

Pressure Relief Procedure



1. Shut off the fluid supply to the meter.
2. Shut off all electrical power to the fluid system.
3. Follow the Pressure Relief Procedure for your fluid system dispensing device.

Flow Meter Function

This is a positive displacement, gear flow meter. The gear flow meter is highly accurate, even with low flow rates. The fluid flowing through the meter rotates the gears. The gear tooth is picked up by a sensor device, which produces an impulse for every gear tooth passing by.

Recommended Usage

Do not exceed the maximum working pressure of your meter or any component or accessory in your system.

- See the **Technical Data** for fluid and ambient temperature limits.
- Only use the flow meter with fluids that are compatible with the “Wetted Parts” listed in the **Technical Data**.

Flow Volume Range

The G3000 and G250 meters flow volume range is 0.02-1.0 gal./min. (75-3800 cc/min.).

The G3000HR and G250HR meters flow volume range is 0.01-0.5 gal./min. (38-1900 cc/min.).

The S3000 solvent meter flow volume range is 0.01-0.5 gpm (38-1900 cc/min).

NOTICE

The flow meter gears and bearings can be damaged if they rotate at too high a speed. To avoid high speed rotation, open the fluid valve gradually. Do not over-speed the meter with air or solvent. To prolong meter life, do not exceed the meter’s maximum flow rate.

Checking the Meter Accuracy

1. To check the accuracy of the meter, turn your gun fan and atomizing air off, then trigger the fluid into a graduated cylinder; dispense at least 500 cc of fluid.
2. Measure the volume of fluid in the beaker in cubic-centimeters (cc) and read the volume on the flow meter monitor.

   G3000 and G250: If the flow meter scale factor is not between 0.112-0.140 cc/pulse, follow the cleaning procedure on page 10, then recalibrate the flow meter.

   G3000HR and G250HR: If the flow meter scale factor is not between 0.05-0.07 cc/pulse, follow the cleaning procedure on page 10, then recalibrate the flow meter.

   S3000: If the solvent meter scale factor is not between 0.019-0.022 cc/pulse, follow the cleaning procedure on page 10, then recalibrate the flow meter.

Troubleshooting

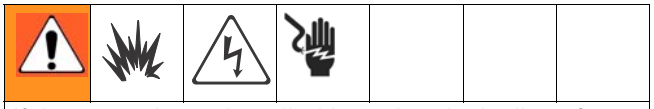
Before servicing this equipment always make sure to **relieve the pressure**.

NOTICE

The sensor is not a serviceable part. Replace it if it is malfunctioning.

Problem	Cause	Solution
No flow volume displayed at monitoring unit.	Flow volume is too low to measure.	Increase flow volume.
	Fluid is not flowing.	Repair.
	Damaged cable.	Replace cable.
	Improper input voltage to sensor.	Make sure input voltage is 10-30 Vdc.
	Damaged sensor.	Replace sensor if it is malfunctioning.
Fluid is not flowing.	Clogs in fluid line or in meter.	Clean fluid line and/or meter; see **Maintenance** on page 9.
	Gears worn or damaged.	Repair meter; see **Maintenance** on page 9.

Maintenance



If the meter is not installed in an instrinsically safe location, make sure the power is off or the electronic sensor is disconnected before wiping the outside of the meter clean with a cloth dampened in a compatible solvent or flushing the meter.

NOTICE

Do not immerse the meter in solvent with the electronic sensor installed. Solvent could damage the electrical components.

Air purge is not recommended for any gear-type flow meter. Air purges do not provide the lubrication the meter gears require.

Residue Build-up on the Meter Gears

Residue build-up may cause the meter gears to bind or stop rotating, which decreases the meter accuracy and makes meter recalibration necessary. As more build-up occurs, recalibration is required more often.

The frequency that your meter requires cleaning depends on the type of fluid being used. Excessive residue build-up usually means that you are using improper cleaning solvents and/or cleaning sequences or processes.

- Check the meter routinely to develop the correct cleaning schedule.
- Use the proper cleaning solvent for the fluid being metered.

Flushing

Flush the fluid supply line and meter fluid reservoir daily with a compatible solvent as instructed below.

1. Follow the **Pressure Relief Procedure**, on page 7.
2. Connect the fluid line to the solvent supply unit.
3. Flush the meter until it is clean.
4. Follow the **Pressure Relief Procedure**, then disconnect the fluid line from the solvent supply unit.
5. Reconnect the fluid line to the fluid (paint) supply.
6. Turn on the fluid supply.
7. Operate until the meter and fluid line are free of solvent.

Cleaning or Servicing the Meter Chamber

NOTICE

Clean and service the meter at a clean workbench. Use only lint-free cloth on parts.

Installing and servicing this equipment requires access to parts that may cause electric shock or other serious injury if the work is not performed properly. Do not install or service this equipment unless you are trained and qualified.

Use only genuine Graco replacement parts. Substitution of components may impair intrinsic safety. This could result in a failure which causes serious injury and/or substantial property damage.

1. Follow the **Pressure Relief Procedure**, on page 7. Then close the fluid shut-off valve on each side of the meter.
2. Disconnect the cable from the electronic sensor device.
3. Disconnect both fluid line fittings and remove the meter from the fluid line.
4. Loosen the two screws and remove the electronic sensor device from the flow meter upper housing. See the **Parts** drawings, pages 13-15.
5. Loosen the screws. Keep a few threads of two opposing bolts engaged to minimize the torque stress on the shafts when you separate the meter housings.
6. Hold onto the upper housing and gently tap the opposing bolts to separate the lower housing.

NOTICE

To avoid damaging the shafts, keep the housings parallel to each other when separating them; do not rock the housings from side to side. Do not use chisels or screwdrivers to split and pry apart the housings.

7. Remove and inspect the gears and shafts. Clean the meter parts with solvent.
8. Reassemble the gears and shafts into the lower housing in the position they were removed from. Check the gears for free and easy rotation.
9. Make sure the two locating pins are in place.
10. Assemble the two meter housings, making sure to keep them parallel to each other.
11. Install the screws. Tighten them oppositely and evenly, to 12 ft-lb (16 N•m). Do not over-tighten.
12. After re-assembling the meter, test the gear rotation by applying a brief air blast to the meter inlet. You should clearly hear the gears spin.
13. Set the electronic sensor on the upper housing and tighten the two screws hand-tight, about 27-57 in-lb (15.8-19.2). Do not over-tighten.

Cleaning or Servicing the Solvent Meter

NOTICE

Clean and service the meter at a clean workbench. Use only lint-free cloth on parts.

Installing and servicing this equipment requires access to parts that may cause electric shock or other serious injury if the work is not performed properly. Do not install or service this equipment unless you are trained and qualified.

Use only genuine Graco replacement parts. Substitution of components may impair intrinsic safety. This could result in a failure which causes serious injury and/or substantial property damage.

1. Follow the **Pressure Relief Procedure**, on page 7. Then close the fluid shut-off valve on each side of the meter.
2. Disconnect the cable from the electronic sensor device.
3. Disconnect both fluid line fittings and remove the meter from the fluid line.
4. Loosen the two screws and remove the electronic sensor device from the flow meter upper housing. See the **Parts** drawing, page 16.
5. Unscrew the 8 screws (3a) from the base (3b) of the meter.
6. Carefully remove the cover (3f). Turn it over and remove the shims (3c).

NOTE: See FIG. 3. Two shim configurations are used. Some meters use one 0.1 mm shim (3c) above each gear (3d) and one below. Other meters stack three shims (.01, .02, and .05 mm, for a total shim height of .08 mm) above and below each gear. When replacing shims, always maintain the configuration used on your meter.

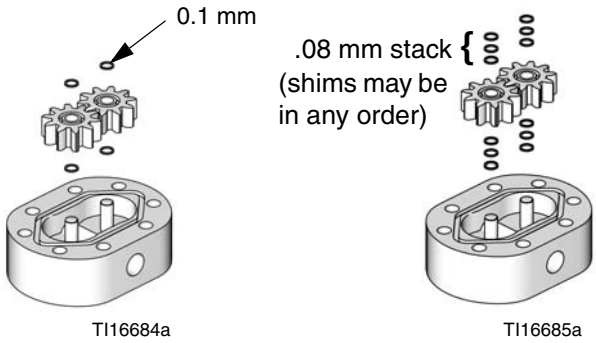


FIG. 3. Shim Configurations

7. Remove the o-ring (3e). Carefully remove the gear/bearing assemblies (3d). Remove the shims (3c).

NOTE: Do not remove the gear shafts (S) or the gear bearings (B).

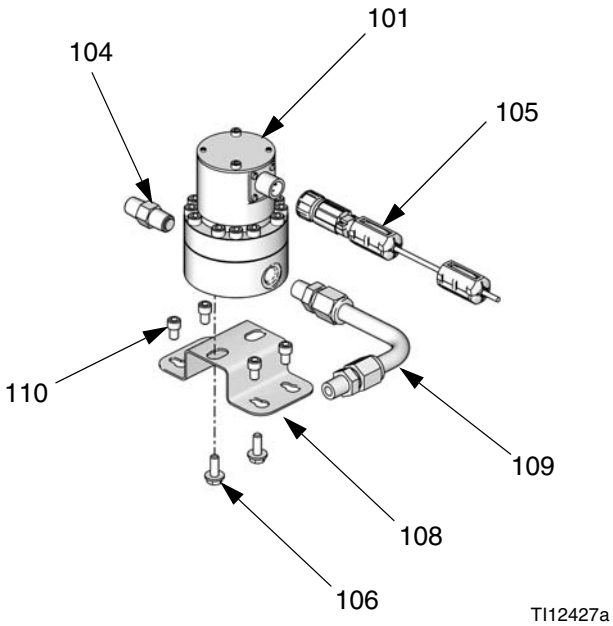
8. Clean the meter parts with solvent. Do not use aggressive cleaning agents. Ultrasonic cleaning is recommended for the gear/bearing assemblies. Dry all parts thoroughly after cleaning.
9. Place the bottom shims (3c) on the shafts (S). Maintain the configuration used on your meter.
10. Install the gear/bearing assemblies (3d) on the shafts. Install the top shims (3c). Maintain the configuration used on your meter.
11. Insert the o-ring (3e) in the groove of the cover (3f). Carefully mount the cover on the base (3b).
12. Install the screws (3a). Tighten them oppositely and evenly, to 11 ft-lb (15 N•m). Do not over-tighten.
13. After tightening all screws, insert a plastic pick through the meter inlet or outlet and check that the gears can turn freely.
14. Set the electronic sensor on the cover and tighten the two screws hand-tight, about 27-57 in-lb (15.8-19.2 N•m). Do not over-tighten.

Parts

Flow Meter Kits, for ProMix 2KS Wall Fluid Panel

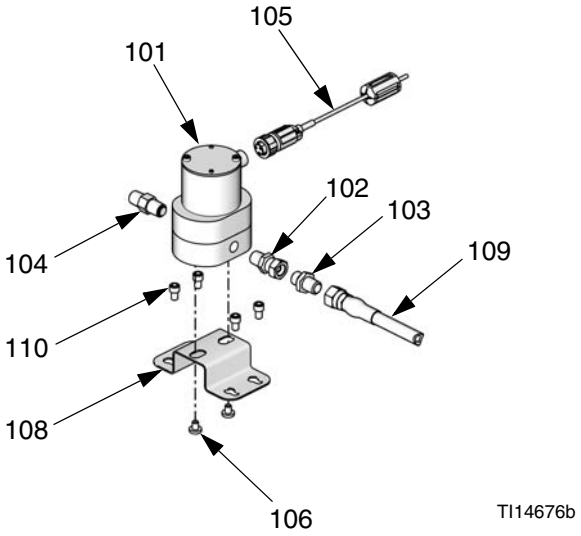
15V804 G3000 Meter Kit

15V827 G3000HR Meter Kit



Ref. No.	Part No.	Description	Qty
101	289813	METER, gear, G3000; used on 15V804; see page 13	1
	289814	METER, gear, G3000HR; used on 15V827; see page 13	1
104	501867	VALVE, check	1
105	258528	HARNESS, cable, with connector	1
106	114182	SCREW, machine, hex flange hd; M6 x 10; 16 mm	2
108	15U749	BRACKET, mounting	1
109	15U750	TUBE, assembly; sst; 1/2 in. (13 mm) OD tube x 1/4 npt	1
110	C19798	SCREW, cap, socket-hd; 1/4-20 x 3/8 in. (10 mm)	4

280555 S3000 Solvent Meter Kit

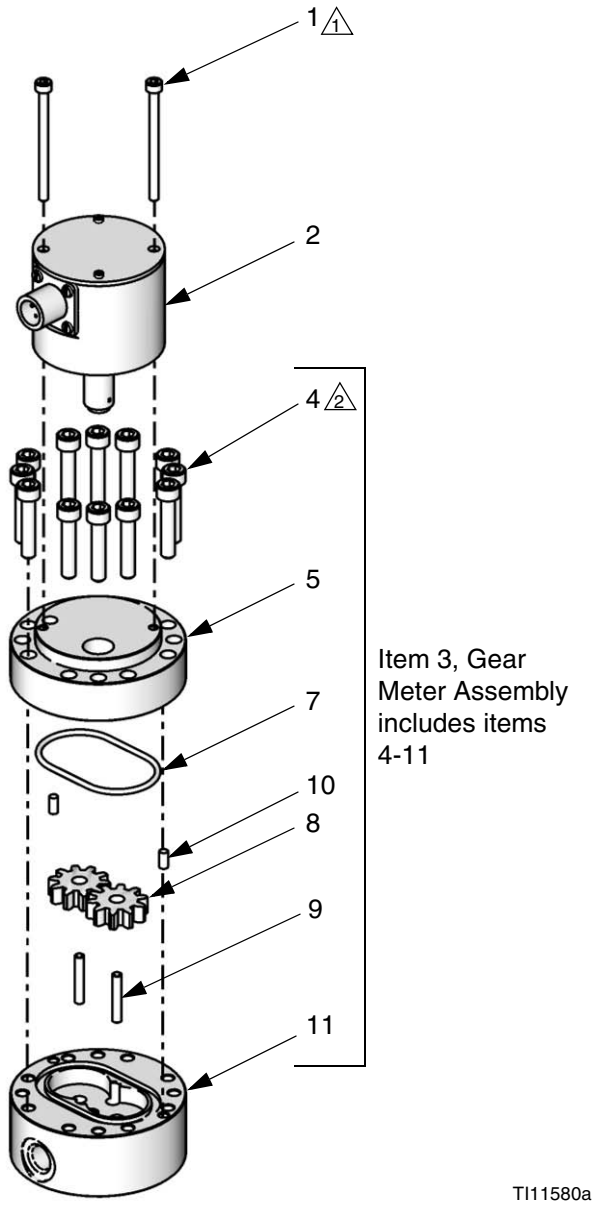


Ref. No.	Part No.	Description	Qty
101	258718	METER, gear, S3000; used on 280555; see page 16	1
102	114339	UNION, swivel; 1/4 npt(m) x 1/4 npsm(f)	1
103	166846	ADAPTER; 1/4 npt x 1/4 npsm (mbe)	1
104	501867	VALVE, check	1
105	258528	HARNESS, cable, with connector	1
106	551295	SCREW, machine, pan hd; M6 x 1; 8 mm	2
108	15U749	BRACKET, mounting	1
109	512616	HOSE; ptfe; 1/4 in. (13 mm) ID; 1/4 npsm(f); 1.5 ft (0.46 m)	1
110	C19798	SCREW, cap, socket-hd; 1/4-20 x 3/8 in. (10 mm)	4

Bare Meter Assemblies

289813 G3000 Meter, with 90° sensor connector

289814 G3000HR Meter, with 90° sensor connector



Ref. No.	Part No.	Description	Qty.
1	114100	SCREW, socket-hd; M4 x 55 mm long	2
2	249430	ELECTRONIC SENSOR	1
3	239719	GEAR METER ASSEMBLY; includes items 4-11; used on 289813	1
	244291	GEAR METER ASSEMBLY; includes items 4-11; used on 289814	1
4	110580	• SCREW	12
5	*	• HOUSING, upper	1
7	110588	• O-RING; ptfe	1
8	239718	• GEAR; used on 289813	2
	244290	• GEAR; used on 289814	2
9	192383	• SHAFT, gear; used on 289813	2
	197142	• SHAFT, gear; used on 289814	2
10	192387	• PIN, locating	2
11	*	• HOUSING, lower	1

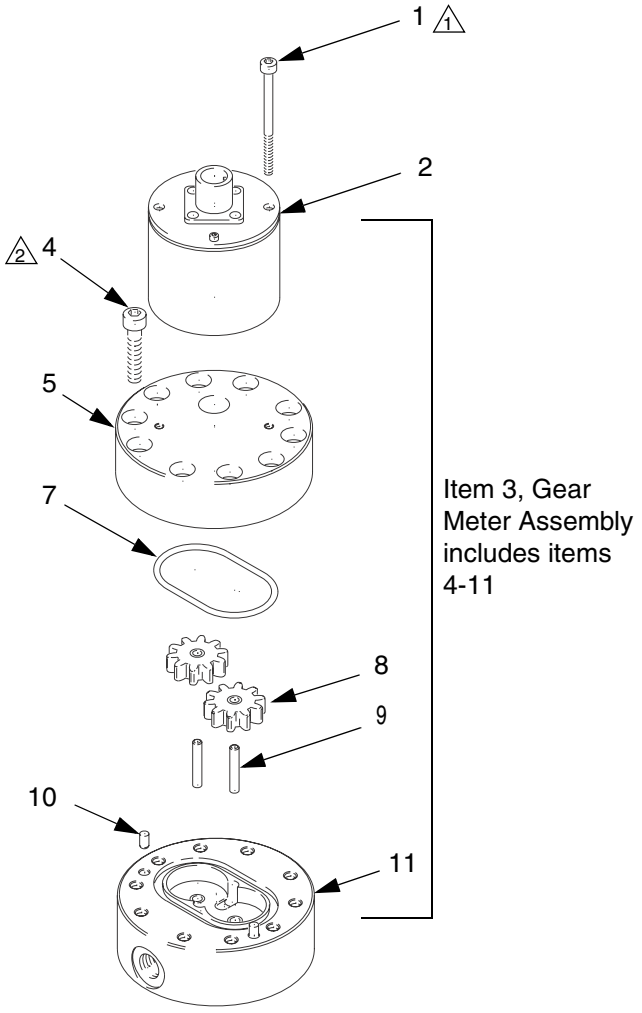
* *Not a replacement part. Order item 3, gear meter assembly.*

⚠1 Torque to 27-57 in-lb (3.1-6.4 N•m).

⚠2 Torque to 140-170 in-lb (15.8-19.2 N•m).

239716 G3000 Meter

244292 G3000HR Meter



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Ref. No.	Part No.	Description	Qty.
1	114100	SCREW, socket-hd; M4 x 55 mm long	2
2	239717	ELECTRONIC SENSOR	1
3	239719	GEAR METER ASSEMBLY; includes items 4-11; used on 239716	1
	244291	GEAR METER ASSEMBLY; includes items 4-11; used on 244292	1
4	110580	• SCREW	12
5	*	• HOUSING, upper	1
7	110588	• O-RING; ptfe	1
8	239718	• GEAR; used on 239716	2
	244290	• GEAR; used on 244292	2
9	192383	• SHAFT, gear; used on 239716	2
	197142	• SHAFT, gear; used on 244292	2
10	192387	• PIN, locating	2
11	*	• HOUSING, lower	1

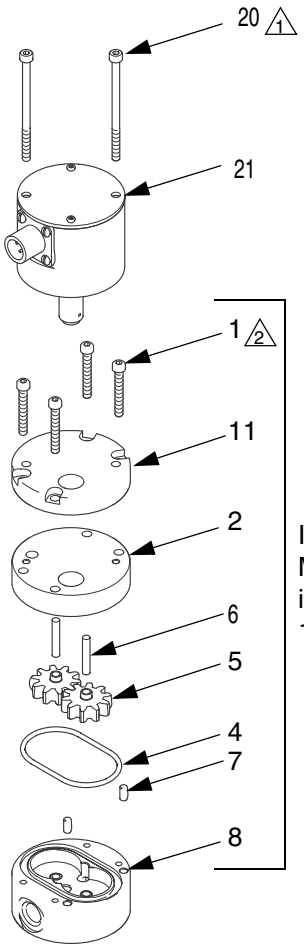
* *Not a replacement part. Order item 3, gear meter assembly.*

⚠1 Torque to 27-57 in-lb (3.1-6.4 N•m).

⚠2 Torque to 140-170 in-lb (15.8-19.2 N•m).

249426 G250 Meter

249427 G250HR Meter



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Ref. No.	Part No.	Description	Qty.
1	111308	SCREW, cap, socket-hd	4
2	*	HOUSING, upper	1
4	110588	O-RING; ptfe	1
5	239718	GEAR; used on 249426	2
	244290	GEAR; used on 249427	2
6	192383	SHAFT, gear; used on 249426	2
	197142	SHAFT, gear; used on 249427	2
7	192387	PIN, locating	2
8	*	HOUSING, lower	1
11	15F866	SPACER	1
20	119839	SCREW, cap, socket-hd; M4x65	2
21	249430	ELECTRONIC SENSOR	1
22	249428	GEAR METER ASSEMBLY; includes items 1-11; used on 249426	1
	249429	GEAR METER ASSEMBLY; includes items 1-11; used on 249427	1

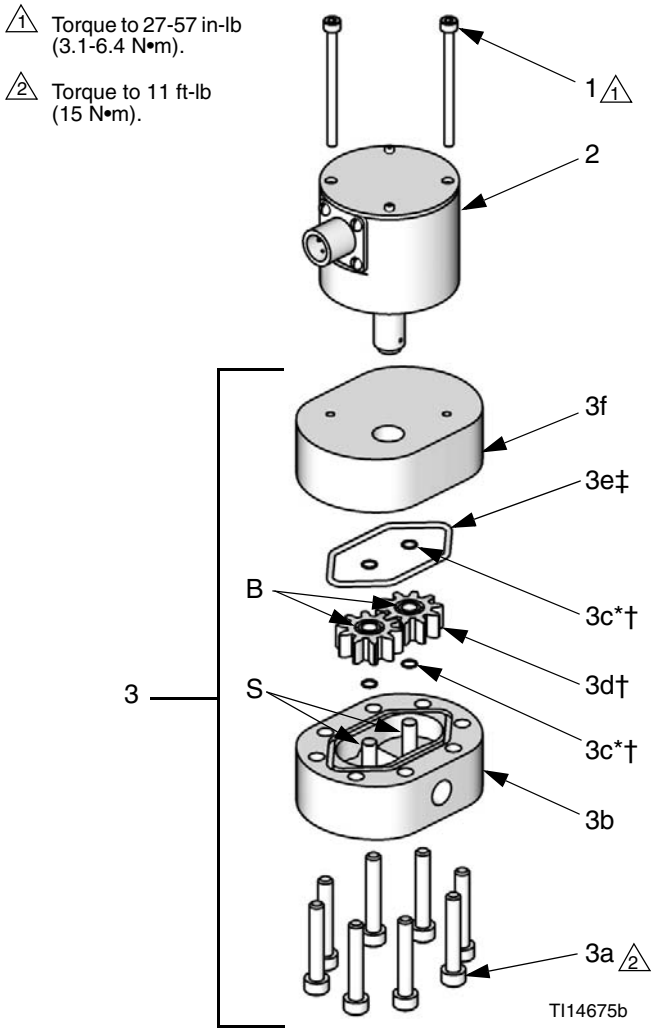
* *Not a replacement part. Order item 22, gear meter assembly.*

1 Torque to 27-57 in-lb (3.1-6.4 N•m).

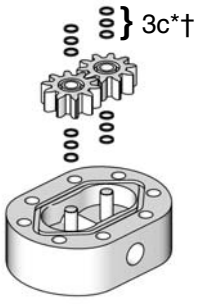
2 Torque to 140-170 in-lb (15.8-19.2 N•m).

Solvent Meter Assembly

258718 S3000 Meter, with 90° sensor connector



Detail of Three Shim Configuration



Ref. No.	Part No.	Description	Qty.
1	114100	SCREW, socket-hd; M4 x 55 mm long	2
2	249430	ELECTRONIC SENSOR	1
3	16A764	GEAR METER ASSEMBLY; used on 258718; includes items 3a-3f	1
3a	---	• SCREW; M6 x 30	8
3b	---	• BASE	1
3c*†	---	• SHIM SET; see sizes below	4
3d†	---	• GEAR/BEARING ASSEMBLY	2
3e‡	---	• O-RING; ptfe	1
3f	---	• COVER	1

* *Included in Shim Kit 24G735. Order separately. Kit includes 4 each of 0.1, .01, .02, and .05 mm sizes. Use sizes appropriate for your meter. Discard unused sizes. See page 11 for shim installation instructions.*

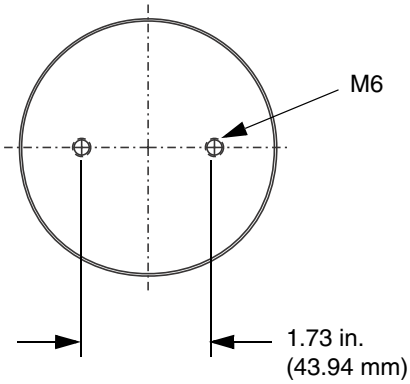
† *Included in Gear/Shim Kit 24G736. Order separately. Kit includes 2 gear/bearing assemblies with appropriate size shims.*

‡ *Included in O-Ring Kit 24G737. Order separately.*

Dimensions

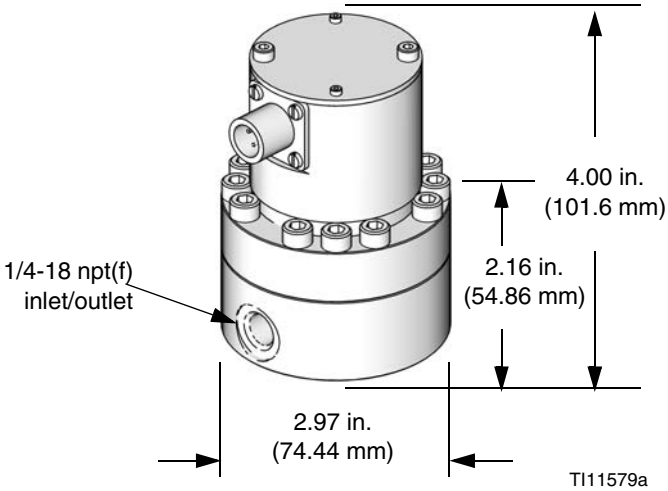
G3000 and G3000HR

Mounting Holes (bottom view)



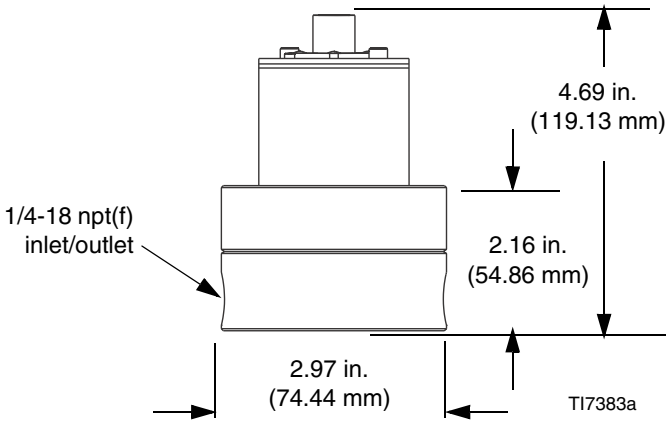
TI7382a

Part Nos. 289813 and 289814



TI11579a

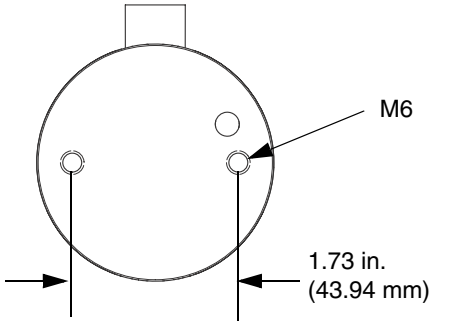
Part Nos. 239716 and 244292



TI7383a

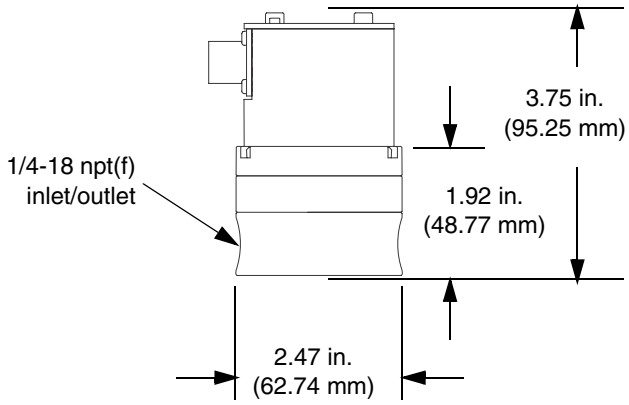
G250 and G250HR

Mounting Holes (bottom view)



TI13042a

Part Nos. 249426 and 249427

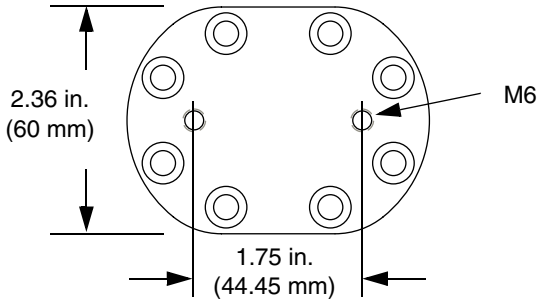


TI13042a

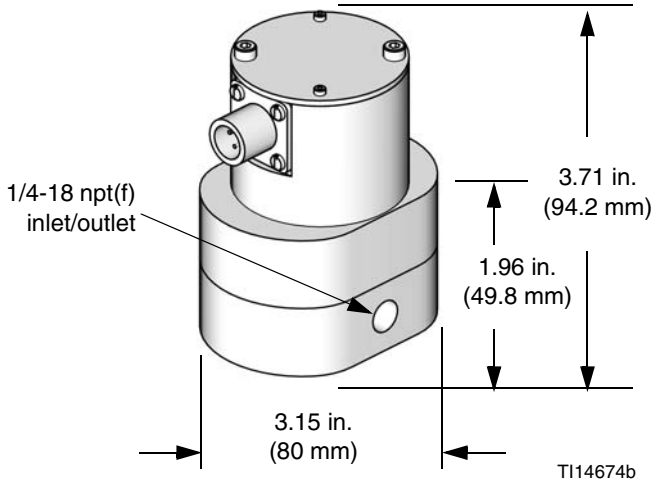
Solvent Meter

Part No. 258718

Mounting Holes (bottom view)



TI14680a

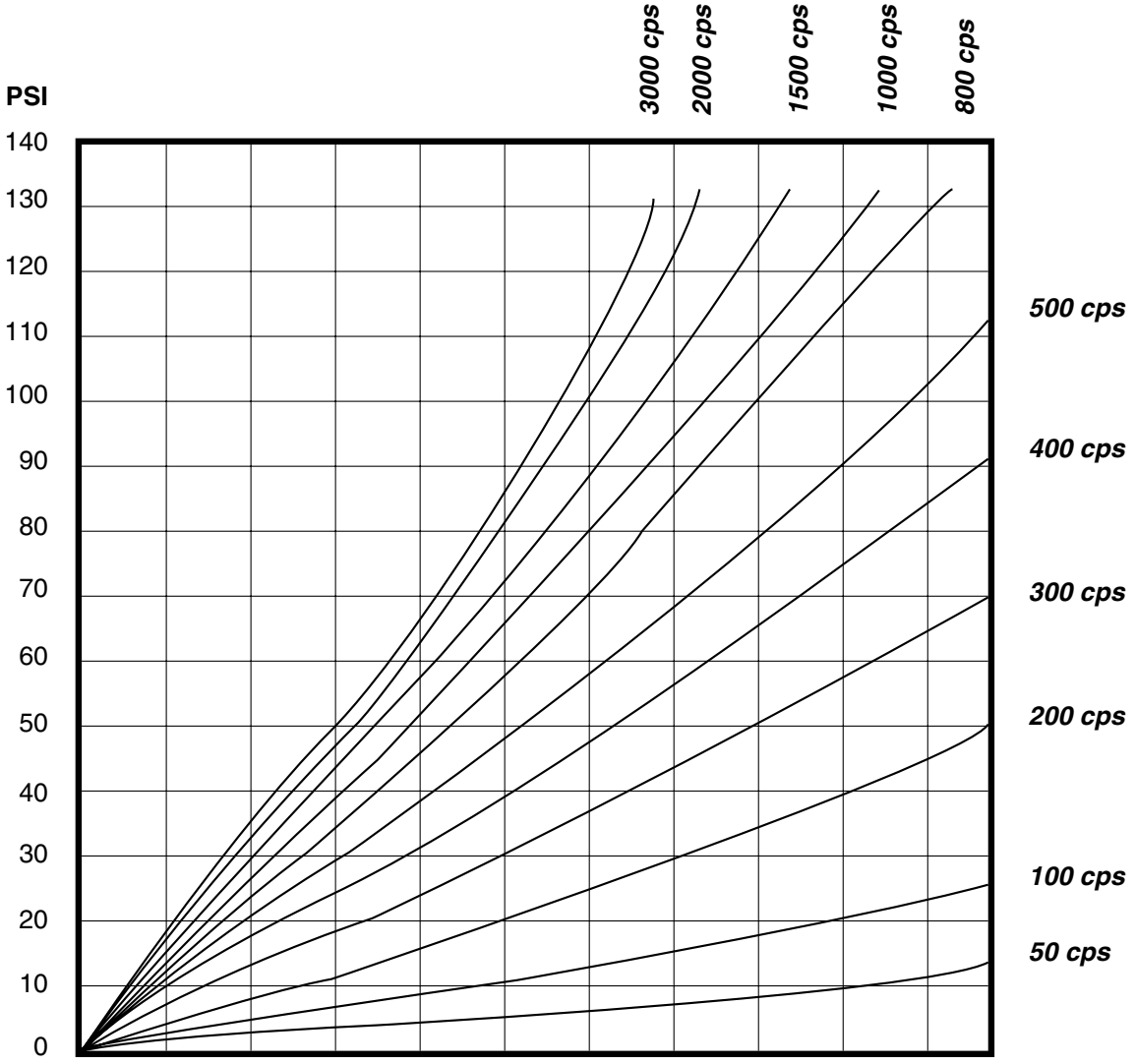


TI14674b

Technical Data

Maximum Fluid Working Pressure	
G3000 and G3000HR	4000 psi (28 MPa, 276 bar)
S3000 Solvent Meter	3000 psi (21 MPa, 210 bar)
G250 and G250HR	250 psi (1.72 MPa, 17.2 bar)
Flow Range	
G3000 and G250	0.02-1.0 gal/min (75-3800 cc/min)
G3000HR and G250HR	0.01-0.5 gal/min (38-1900 cc/min)
S3000 Solvent Meter	0.01-0.5 gal/min (38-1900 cc/min)
Fluid Temperature Range	40-180°F (4-80°C)
Maximum Ambient Temperature	180°F (80°C)
Fluid Viscosity Range	
G3000 and G3000HR	20-3000 cps (see **Pressure Drop Curve** on page 20)
S3000 Solvent Meter	solvent and light viscosity clear fluids (20-50 cps)
G250 and G250HR	20-3000 cps (see **Pressure Drop Curve** on page 20)
Maximum Cable Length	200 ft (61 m)
Flow Meter Inlet/Outlet	1/4 npt(f)
Resolution	
G3000 and G250	0.119 cc/pulse
G3000HR and G250HR	0.061 cc/pulse
S3000 Solvent Meter	0.021 cc/pulse
Accuracy	
G3000, G3000HR, G250, and G250HR	+/- 0.5% through communicated flow range for most commonly used coatings. Accuracy will diminish at low viscosities and low flow rates.
S3000 Solvent Meter	+/- 2.5% through communicated flow range.
Supply Voltage	10-30 Vdc
Intrinsic Safety	Class I; Div. 1; Group D V max = 30 V I max = 15 mA Ci = 0.2 microfarads Li = 0 mH
Approvals	See front cover
Wetted Parts	
G3000 and G3000HR	303 Stainless Steel, Tungsten Carbide, PTFE
S3000 Solvent Meter	303 Stainless Steel, PTFE
G250 and G250HR	303 Stainless Steel, Tungsten Carbide, PTFE
Weight	
G3000 and G3000HR	6 lb (2.7 kg)
S3000 Solvent Meter	6 lb (2.7 kg)
G250 and G250HR	2.6 lb (1.8 kg)

Pressure Drop Curve



G3000/G250	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	**gal/min**
G3000HR/G250HR	0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	**gal/min**
S3000	0.0	0.025	0.05	0.065	0.076	0.083	0.10	0.13	0.16	0.19	0.22	0.25	**gal/min**

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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Original instructions. This manual contains English. MM 308778

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